

**EXHIBIT 11**

**Marcel Moreau Site Specific Report  
(Beacon-ARCO #615) Excerpts**

- Excerpt from the Expert Site Specific Report of Marcel Moreau (Nov. 2, 2011), submitted on behalf of Plaintiff City of Fresno, pertaining to Beacon-ARCO #615.

## Beacon Arco 3615

1625 Chestnut Avenue, Fresno

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### MAJOR MILESTONES

~1975	There were reportedly three 12,000-gallon USTs and one 6,000-gallon UST at the site, installed when the gasoline service station was constructed. They were single-walled (SW) steel tanks, with no corrosion protection on tanks or piping. [7 30 1992]
Aug 29, 1991	The fuel island was extended and an unleaded (NL) dispenser was added.
June 10, 1998	Three 10,000-gal and one 6,000-gal USTs were removed. Soil discoloration was observed at several locations.
June 15, 1998	UST Permit Application, Forms A, B, & C - Amended permit. Two 14,000-gallon and one 10,000-gallon double-walled (DW) Trusco tanks, with DW FRP piping, were installed. [5/22/1998]
Sept 27, 1998	MtBE and other contaminants were reported in soil samples from beneath the former tanks and dispensers.
Feb 8, 2002	The RWQCB reviewed the case history and required further investigation.
Sept 25, 2003	CRWQCB confirmed the completion of a site investigation and corrective action for the USTs at the facility.

### SPILL/LEAK EVENT CHRONOLOGY

April 6, 1987	Permit to Perform Precision Test on USTs. There were reportedly three 12,000-gallon and one 6,000-gallon steel gasoline USTs at the facility. Passing results for the unleaded, premium unleaded, and diesel were indicated on a summary table. [5 1 1998]
April 13, 1987	Permit to Construct, Repair or Replace an UST Facility. This permit was for uncovering four 10,000-gal USTs, fills, and vapor vents and for exploring the fill pipe, vapor pipe and vent for a possible leak (north

tank). "Upon corrections, we will install fill - spill containments on 4 tanks. Possible tie in vapor & vent line to ball check system & TLS 250 VR monitor."

April 29, 1987	Permit to Perform Precision Test on USTs. This permit was for testing three 12,000-gallon USTs and one 6,000-gallon UST. This is indicated to be a retest. Passing results for the regular and the diesel tanks were indicated on a summary table. [5/1/1998]
June 7, 1994	Official Inspection Report. Diesel pump #5/6 was leaking inside the dispenser. The inspector directed the operator to close the dispenser and have it repaired, and also to have the dispenser across from #5/6 checked for leaks.
June 8, 1994	FCDEH Telephone Call Record. The facility reported that Maintenance had caulked the fitting for the flow valve and stopped the leak.
May 1, 1998	This table listed tank test results beginning with 5/4/1987 and ending with 5/1/1998. No failing results were on the list.
June 10, 1998	UST Abandonment Inspection Report. Three 10,000-gal and one 6,000-gal USTs were removed. Soil samples were collected for analysis. Soil discoloration was observed at several locations (D2, D4, D5, and L4). No holes were observed in the 6,000-gal tank (T4). Tank 2 (14,000-gal, T2) had an indentation noted on the west side from the excavator. Tank 1 (14,000-gal, T1) had a large indentation at the west seam from the excavator.
Oct 13, 1998	The FCDEH filed a URR for a gasoline and diesel release discovered on 10/13/1998 during UST removal. The cause and source of the release were unknown.
Aug 18, 2005	FCDEH Telephone Call Record. A site representative called to report a release that occurred 8/17/2005 at 7:30 PM. A customer had a leaking gas tank that leaked 2 to 3 gallons of NL gasoline. The fuel was cleaned up with absorbent and place in an onsite drum for disposal.
Jan 14, 2009	Tanknology line test and monitor certification. A small amount of fuel was removed from dispenser #1/2.
Jan 13, 2010	UST Official Inspection Report. The inspector reported: "System cold start - No positive shut down programmed after EVR upgrade. 9/10 & 11/12 satellite water/product. Maintain clean and dry dispenser pans."

## SOIL/GROUNDWATER CONTAMINATION CHRONOLOGY

- Feb 1985                      There were reportedly three 12,000-gallon USTs and one 6,000-gallon UST at the site, installed when the gasoline service station was constructed in approx. 1977. As part of a real estate transaction, three soil borings were advanced in Feb 1985 near the UST pit (B-1 to B-3). Two borings were advanced to 35 ft bgs (B1 & B2), and the third was advanced to groundwater (85 ft bgs). Soil samples were collected, and a groundwater sample was collected at B-3. No TPHg, TPHd, or BTEX were reported in the 14 soil samples collected. The groundwater sample contained BTX compounds in the range of 1 ppb. Monitoring wells were installed in the two shallow borings. The deep boring was abandoned, and a shallow boring (31 ft bgs) was drilled next to it and was completed as a monitoring well. [9/27/1998]
- Sept 27, 1998                Tank Closure Report. All of the removed tanks were found to be in good condition. No holes or pitting were observed on any of the USTs.
- Existing Tank Area: Ten soil samples were collected at 15 to 20 ft bgs from the existing tank excavation area. Laboratory analyses indicated that TPHg was present in samples collected from Tank 3 and Tank 4 (max concentration of 4,600 ppb). MtBE was reported in samples from beneath Tanks 2, 3, and 4, at concentrations of 11 ppb to 3,400 ppb. MTBE was reported at 81,000 ppb in a sample collected 12 ft north of Tank 4 (northernmost UST) at 21 ft bgs.
- Dispenser Area: Nine soil samples were collected from beneath the six dispensers (D1 to D-6, 5 and 10 ft bgs), and TPHg was present in samples from beneath dispensers 2, 3, and 4, at a maximum concentration of 5,600,000 ppb (D-2, 5 ft bgs). The D-2 samples were found to have MtBE at 73,000 ppb (5 ft bgs) and 66,000 ppb (10 ft bgs).
- Product Line Samples: Four samples were collected from product lines (L-1 to L-4) at 5 ft bgs. TPHg was found in samples L-2 to L-4, at a maximum concentration of 660,000 ppb (L-3). MtBE was reported in these samples as well, at a high of 2,400 ppb (L-4).
- Jan 10, 2002                Assessment Report, UST Closure Report. On Nov 1-2, 2001, four boreholes (B-4 to B-7) were drilled to between 40 and 60 ft bgs to assess the vertical extent of petroleum hydrocarbons to the north of the former tank cluster, and beneath dispensers 2, 3, and 4. Seventeen soil samples were collected for analysis of TPHd, TPHg,

BTEX, MtBE, DIPE, ETBE, TAME, and tert-butanol. Most samples were ND for these analytes. TPHg was detected at 1,300,000 ppb in sample B4-30 (30 ft bgs), and at 550,000 ppb in sample B7-15. MtBE was detected in all samples from B-4, from 14 ppb (60 ft bgs) to 3,300 ppb (30 ft bgs). DIPE, ETBE, and TAME were ND for all samples, and there were two low detections of tert-Butanol. The report concluded that the vertical extent of petroleum hydrocarbons had been delineated in the four areas of concern.

Dec 23, 2002	Additional Assessment Report. In Sept 2002, six boreholes (B-8 to B13) were drilled. No fuel-related hydrocarbons or oxygenates were detected in samples collected between 10 and 30 ft bgs. MtBE and tert-butanol were detected in the 30 ft sample at B-13, but not in the 20-ft sample. MtBE concentrations diminished with depth in B-12 and B-13. No petroleum hydrocarbons were present beneath the former tank cluster.
Sept 25, 2003	CRWQCB confirmed the completion of a site investigation and corrective action for the USTs at the facility. In the Case Closure Summary, the RWQCB stated that a release of petroleum hydrocarbons had occurred in the vicinity of the former USTs and dispensers. The extent of impacted soils had been adequately evaluated.

## **IDENTIFICATION OF MTBE RELEASES**

### Tank Area Releases

BTX compounds were detected in groundwater in the vicinity of the tank field in February of 1985. The source of this contamination is not known. The releases that produced this contamination were likely intermittent. The volume released is not known. MtBE was not present in California gasoline in 1985, so the releases discovered at this time likely did not contribute to MtBE contamination at this site.

In June of 1998, the underground storage systems were removed. Five of ten soil samples collected from the vicinity of the storage tanks contained MtBE, with the highest level detected being 81,000 ppb. The USTs were reported to be in good condition with no holes when they were removed. The releases responsible for the contamination beneath these tanks may have originated from delivery spills or leaks from the submersible pump or adjacent piping. The releases were likely intermittent. The volume released is not known.

### Piping and Dispenser Area Releases

In April of 1987 a permit to excavate to the tops of the tanks to investigate a leak was given. Based on the recorded test results, it is likely that the regular product tank failed a test on April 8. The permit requested to excavate to the tank tops indicates that the leak was likely in the piping. The exact location of the leak is not known. When the release began is not known. The volume released is not known. Whether MtBE may have been present in the gasoline supplied to this facility at this time is not known.

On June 7, 1994 a leak in diesel dispenser #5/6 was discovered during an inspection. The leak was repaired on June 8. There was no dispenser containment present at this time, so any leakage would have gone directly into the soil. MtBE was likely present as a contaminant in diesel fuel in 1994. When the leak began is not known. The volume released is not known.

In June of 1998, the underground storage systems were removed. Eight of nine soil samples collected from beneath the dispensers contained MtBE. The highest MtBE level detected in these samples was 73,000 ppb. Three of four samples collected from beneath the piping contained MtBE. The highest MtBE level detected in these samples was 2,400 ppb. Releases from the piping and dispensers were likely intermittent. The volume released is not known.

In January of 2009, fuel was removed from beneath dispenser #1/2. MtBE should not have been present in California motor fuel in 2010, so this release likely did not contribute to the MtBE contamination at this facility.

In January of 2010, fuel and water were observed beneath dispensers. MtBE should not have been present in California motor fuel in 2010, so this release likely did not contribute to the MtBE contamination at this facility.

### Customer Spills

In August of 2005, a customer gas tank leaked 2 to 3 gallons of unleaded gasoline. MtBE should not have been present in California gasoline in 2005, so this spill likely did not contribute to the MtBE contamination at this facility.

Small spills are common during vehicle fueling activities and no doubt occurred throughout the time this facility was in operation. Fueling spills may have contributed to the MtBE contamination present in the dispenser area at this facility.